Virginia Department of Health Radioactive Materials Program (804) 864-8150



## APPLICATION FOR A NEW RADIOACTIVE MATERIAL LICENSE AUTHORIZING THE USE OF SELF-SHIELDED IRRADIATORS

The Virginia Department of Health (VDH) is requesting disclosure of information for the purpose of obtaining a radioactive material license. Failure to provide any information may result in denial or delay of a radioactive material license.

**Instructions** – Complete all items. Refer to VAREG 'Guidance for Self Shielded Irradiators' for additional information. Use supplementary sheets where necessary. Retain one copy and submit original of the entire application to: Virginia Department of Health, Radioactive Materials Program, 109 Governor Street. Room 730. Richmond. VA 23219.

| APPLICATION TYPE   |  |  |  |  |
|--|--|--|--|--|
| Item 1 Type Of Application (Check box)   |  |  |  |  |
| New License  |  |  |  |  |
| CONTACT INFORMATION  |  |  |  |  |
| Item 2 Name And Mailing Address Of Applicant:  | em 3 Person To Contact Regarding Application: ame: |  |  |  |
|  | E-mail:  |  |  |  |
| Applicant's Telephone Number (Include area code):  | Telephone Number (Include area code) ( ) - X       |  |  |  |
| LOCATION OF RADIOACTIVE MATERIAL   |  |  |  |  |
| Item 4 Address(es) Where Licensed Material Will Be Used or Possessed   | (Do not use Post Office Box):                      |  |  |  |
| Address  | Telephone Number (Include area code)               |  |  |  |
| Address  | Telephone Number (Include area code)               |  |  |  |
| Address  | Telephone Number (Include area code)               |  |  |  |
| RADIATION SAFETY OFFICER   |  |  |  |  |
| Item 5. Radiation Safety Officer (RSO) (Check one box)   |  |  |  |  |
| RSO Name: Tel (Include are   | ra code): ( ) - X                                  |  |  |  |
| E-mail:  |  |  |  |  |
| The above named individual will perform all duties and responsibilities as listed in Appendix H in VAREG 'Guidance for Self-Shielded Irradiators' and ensure proper oversight of the radiation safety program, including but not limited to, performing periodic on-site evaluations |  |  |  |  |
| OR  Alternative information is attached demonstrating how the listed individual will perform the duties and responsibilities and detailing how oversight of the radiation safety program will be conducted, including but not limited to, performing periodic on-site evaluations.   |  |  |  |  |
| AND EITHER   |  |  |  |  |
| Before obtaining radioactive material, the proposed RSO will have successfully completed training as described in Appendix G of VAREG 'Guidance For Self-Shielded Irradiators'.  |  |  |  |  |
| OR  Alternative information demonstrating that the proposed RSO is qualified by training and experience is attached. (attach evidence of training and experience)  |  |  |  |  |

| AUTHORIZED USERS                        |  |   |  |  |
|---|--|---|--|--|
| Item 6 Authorized Users (Check one box) |  |   |  |  |
|   | Before using radioactive material, authorized users will have received training as described in Appendix G in VAREG 'Guidance for Self-Shielded Irradiators.'  |   |  |  |
|   | OR   |   |  |  |
|   | A description of the training and experience for proposed authorized users is attac  | ned.  |  |  |
| RAI                                     | RADIOACTIVE MATERIAL   |   |  |  |
| Item                                    | Item 7 Radioactive Material (Attach additional pages if necessary)   |   |  |  |
| Elem                                    | Element and mass number Maximum  | quantity requested for each radionuclide:   |  |  |
| Devi                                    | Device manufacturer or distributor and model number: Intended u  | se:   |  |  |
|   |  |   |  |  |
| FAC                                     | FACILITIES AND EQUIPMENT   |   |  |  |
| Item                                    | Item 8 Facilities And Equipment (Check all that apply)   |   |  |  |
|   | ☐ Diagrams of radioactive material area(s) of use are attached.  |   |  |  |
|   | AND EITHER   |   |  |  |
|   | We will ensure that each area where a self-shielded irradiator is located corresponds to the "Conditions of Normal Use" and "Limitations and/or Other Considerations of Use" on the applicable irradiator's Sealed Source and Device Registration Certificate; the floor beneath the self shielded irradiator is secured to prevent unauthorized access or removal; and each area where a self shielded irradiator is located is equipped with an automatically operated fire detection and control system (sprinkler, chemical, or gas) or the location of the area and other controls ensure a low-level radiation risk attributable to fires. |   |  |  |
|   | OR   |   |  |  |
|   | We will submit alternative information; be sure to include justification for placing an irradiator in an area that does not correspond to the "Conditions of Normal Use" and the "Limitations and/or Other Considerations of Use".   |   |  |  |
| RADIATION SAFETY PROGRAM                |  |   |  |  |
| Item                                    | Item 9 Radiation Safety Program  |   |  |  |
|   | Item 9.1 Audit Program  The applicant is not required to, and should not, submit its audit program to the agency for review. This matter will be examined during inspection.   |   |  |  |
| Item                                    | Item 9.2 Radiation Monitoring Instruments (Check one box)  |   |  |  |
| Ц                                       | We will use instruments that meet the radiation monitoring instrument specifications published in Appendix K of VAREG 'Guidance for Self-Shielded Irradiators'. Additionally, each survey meter will have been calibrated by the manufacturer or other person authorized by VDH, the NRC or another Agreement State to perform survey meter calibrations no more than 12 months before the date the meter is used.   |   |  |  |
|   | OR   |   |  |  |
|   | We will use instruments that meet the radiation monitoring instrument specifications published in Appendix K of VAREG 'Guidance for Self-Shielded Irradiators'. Additionally, we will implement the model survey meter calibration program published in Appendix K of VAREG 'Guidance for Self-Shielded Irradiators' and we ensure that each survey meter will have been calibrated no more than 12 months before the date the meter is used.  |   |  |  |
| OR                                      |  |   |  |  |
|   | We will have access to survey equipment and/or procedures for ensuring that interirradiator sources to the shielded position and/or determining source shielding interior  | locks function, as required, to return moving self shielded grity after an incident involving the self shielded irradiator. |  |  |

|                          | The state of the s |   |  |  |  |
|--------------------------|--|---|--|--|--|
|                          | Item 9.3 Material Receipt And Accountability (Check box)   |   |  |  |  |
| Ш                        | Physical inventories will be conducted at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license. Records of inventories will be maintained for 5 years from the date of each inventory, and shall include the radionuclides, quantities, manufacturer's name and model numbers, location, individual performing inventory and the date of the inventory.  |   |  |  |  |
| Item                     | 9.4 Occupational Dose (Check one box)  |   |  |  |  |
|                          | We will maintain, for inspection by the agency, documentation demoradiation dose in excess of 10 percent of the allowable limits in 12 Va  | nstrating that unmonitored individuals are not likely to receive, in one year, a AC 5-481-640.          |  |  |  |
|                          |  | OR  |  |  |  |
|                          | We will provide dosimetry processed and evaluated by a NVLAP-approcessor.  | proved processor that is exchanged at a frequency recommended by the                                    |  |  |  |
| Item                     | 9.5 Public Dose  |   |  |  |  |
|                          | No response is required, in this license application, however the licensee's evaluation of public dose will be examined during an inspection.  |   |  |  |  |
| Item                     | 9.6 Operating And Emergency Procedures (Check one box)   |   |  |  |  |
|                          | We will develop, implement, maintain and distribute operating procedures" in VAREG 'Guidance for Self-Shielded Irradiators'. (Procedures)  | dures that will meet the Criteria in the section titled "Operating and Emergency occdures are attached) |  |  |  |
|                          |  | OR  |  |  |  |
| П                        | We will submit alternative procedures. (Procedures are attached)   |   |  |  |  |
| Item                     | 9.7 Leak Tests (Check one box)   |   |  |  |  |
|                          |  |   |  |  |  |
|                          | List Name and License number of organization authorized to perform State)  | or analyze leak test (Specify whether VDH, NRC, or another Agreement                                    |  |  |  |
|                          | Organization Name I  | License Number  |  |  |  |
|                          | <u> </u>   | Agency:   |  |  |  |
|                          | <b>Note</b> : An alternate organization may be used to perform or analyze leauthorized by VDH, NRC, or another Agreement State.  | ak test, without amending the license, provided the organization is specifically                        |  |  |  |
|                          | -  | OR  |  |  |  |
|                          | We will perform leak testing and sample analysis and will follow the Irradiators'. (Procedures are attached)   | nodel procedures in Appendix P of VAREG 'Guidance for Self-Shielded                                     |  |  |  |
|                          | OR   |   |  |  |  |
| П                        | We will submit alternative procedures. (Procedures are attached)   |   |  |  |  |
|                          | Item 9.8 Maintenance (Check one box for Routine Cleaning and Lubrication and one for Non-Routine Maintenance)  |   |  |  |  |
| ROI                      | ROUTINE CLEANING AND LUBRICATION:  |   |  |  |  |
|                          | We will implement and maintain procedures for routine maintenance  | of our self shielded irradiators according to each manufacturer's (or                                   |  |  |  |
|                          | distributor's) written recommendations and instructions.   |   |  |  |  |
| OR                       |  |   |  |  |  |
|                          | Alternative procedures are attached.   |   |  |  |  |
| NON-ROUTINE MAINTENANCE: |  |   |  |  |  |
|                          | We will have the self shielded irradiator manufacturer (or distributor) perform the non-routine maintenance.   | or other person authorized by VDH, the NRC or another Agreement State                                   |  |  |  |
|                          |  | OR  |  |  |  |
|                          | We will provide procedures that address the information listed in Appreciation to perform this work. (Procedures are attack  | pendix I of VAREG 'Guidance for Self-Shielded Irradiators' supporting a                                 |  |  |  |

| Item 0.0 Transportation (Charleson han)  |              |  |  |  |
|--|--------------|--|--|--|
| Item 9.9 Transportation (Check one box)  |              |  |  |  |
| We choose to transfer possession of radioactive material to an irradiator manufacturer, distributor or service licensee with a VDH, NRC or another Agreement State license who then acts as the shipper.   |              |  |  |  |
| OR   |              |  |  |  |
| ☐ Before offering a Type B package for shipment we will be registered with the NRC as user of the package and obtain VDH approval of our QA program.   |              |  |  |  |
| DISPOSAL, TRANSFER AND LICENSE TERMINATION   |              |  |  |  |
| Item 10 Disposal, Transfer and License Termination   |              |  |  |  |
| Item 10.1 Disposal And Transfer (Check Box)  |              |  |  |  |
| We will return the source to the manufacturer for disposal or transfer the device to a specific licensee authorized to receive radioactive material.   |              |  |  |  |
| Item 10.2 Termination Of Activities (Check box)  |              |  |  |  |
| ☐ We will notify the agency, in writing, within 30 days of the decision to permanently cease radioactive material use (12VAC5-481-500).  |              |  |  |  |
| LICENSE FEE  |              |  |  |  |
| Item 11 License Fees (Refer to 12 VAC 5-490.)  |              |  |  |  |
| License fee enclosed:  |              |  |  |  |
| Yes Amount Enclosed \$   |              |  |  |  |
| CERTIFICATION (To be signed by an individual authorized to make binding commitments on behalf of the approximation)  | plicant.)    |  |  |  |
| Item 12  |              |  |  |  |
| I hereby certify that this application was prepared in conformance with 12VAC5-481 'Virginia Radiation Protection Regulations' and that all information contained herein, including any supplements attached hereto, is true and correct to the best of my knowledge and belief. |              |  |  |  |
| SIGNATURE - Applicant Or Authorized Individual   | Date signed: |  |  |  |
|  |              |  |  |  |
| Print Name and Title of above signatory  |              |  |  |  |